

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

TYCO HEALTHCARE GROUP LP,	§	
MALLINCKRODT INC. and LIEBEL-	§	
FLARSHEIM COMPANY,	§	
Plaintiffs,	§	
	§	CIVIL ACTION NO. 2:07-CV-262 (TJW)
v.	§	
	§	
E-Z-EM, INC. and ACIST MEDICAL	§	
SYSTEMS, INC.,	§	
Defendants.	§	

MEMORANDUM OPINION AND ORDER

After considering the submissions and the arguments of counsel, the Court issues the following order regarding claim construction:

I. BACKGROUND

Plaintiffs Mallinckrodt Inc. and Liebel-Flarsheim Company (collectively “Mallinckrodt”) assert United States Patent Nos. 5,868,710 (“the ‘710 patent”) against Defendants E-Z-EM, Inc. and ACIST Medical Systems, Inc. (collectively, “E-Z-EM”). Mallinckrodt and E-Z-EM are competitors in the field of powered radiological injectors. The ‘710 patent has a priority date of November 22, 1996 and issued February 9, 1999. During prosecution of the ‘710 patent, the United States Patent and Trademark Office (“PTO”) issued a restriction requirement, after which the applicants canceled a number of the claims from the original application and refiled them in four additional divisional applications.¹ The issued patent has two independent claims (claim 1 and claim 9) and ten dependent claims, all of which are asserted against E-Z-EM. The ‘710 patent is entitled “Medical Fluid Injector” and teaches incorporating a tilt sensor with powered medical injectors that are used, for example, to inject contrast media into a patient during a CT

¹ The divisional patents issued as U.S. Patent Nos. 5,925,022; 6,004,292; 6,159,183; and 6,254,572.

scan, angiogram, MRI, ultrasound, or other radiological diagnostics examination. Radiologists use powered injectors because they deliver an even flow of contrast media during the radiological exam.

One of the safety goals associated with the use of powered injectors is to eliminate air bubbles in the injected fluid. To help minimize air bubbles, the injection technician should use different speeds and different syringe orientations depending upon whether the syringe is being filled with injection fluid or being emptied (or expelled) into the patient. Having the needle above the syringe barrel minimizes the risk of air bubbles during filling. Likewise, during the injection process, using slower speeds with the needle below the barrel of the syringe reduces the risk of air bubbles. The '710 patent sought to address two problems with prior art powered injection systems. First, a display on the injector head would be upside down and difficult to read when the injector head is inverted during the filling process. '710 patent, 1:55–62. Second, permitting the same range of speeds for the syringe plunger during both filling and expelling processes can increase the risk of air bubbles. *Id.* The '710 patent teaches using a sensor to detect the tilt angle of a powered injector syringe and using the angle to determine the syringe's plunger speed and to select the orientation of an invertible display. '710 patent, 3:39–45; '710 patent, 3:53–62.

II. GENERAL PRINCIPLES GOVERNING CLAIM CONSTRUCTION

“A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

To ascertain the meaning of claims, the court looks to three primary sources: the claims,

the specification, and the prosecution history. *Markman*, 52 F.3d at 979. Under the patent law, the specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims." *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's claims. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). And, although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This court's claim construction decision must be informed by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the *claims* of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d at 1312 (emphasis added) (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary

meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention. The patent is addressed to and intended to be read by others skilled in the particular art. *Id.*

The primacy of claim terms notwithstanding, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314-17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. The prosecution history helps to demonstrate how the inventor and the PTO understood the patent. *Phillips*, 415 F.3d at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence. That evidence is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims.

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Id.* at 1319-24. The approach suggested by *Texas Digital*—the assignment of a limited role to the specification—was rejected as inconsistent with decisions holding the specification to be the best guide to the meaning of a disputed term. *Id.* at 1320-21. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of the claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.* What is described in the claims flows from the statutory requirement imposed on the patentee to describe

and particularly claim what he or she has invented. *Id.* The definitions found in dictionaries, however, often flow from the editors' objective of assembling all of the possible definitions for a word. *Id.* at 1321-22.

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323-25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The parties dispute whether the patent-in-suit includes a claim limitation that falls within the scope of 35 U.S.C. § 112 ¶ 6. “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure. . . in support thereof, and such claim shall be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.” 35 U.S.C. § 112 ¶ 6. When a claim uses the term “means” to describe a limitation, a presumption inheres that the inventor used the term to invoke § 112 ¶ 6. *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007). “This presumption can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety.” *Id.* (citing *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003)). Once the court has concluded the claim limitation is a means-plus-function limitation, the first step in construing a means-plus-function limitation is to identify the recited function. *See Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). The second step in the analysis is to identify in the

specification the structure corresponding to the recited function. *Id.* The “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Medical Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003), citing *B. Braun v. Abbott Labs*, 124 F.3d 1419, 1424 (Fed. Cir. 1997).

The patentee must clearly link or associate structure with the claimed function as part of the quid pro quo for allowing the patentee to express the claim in terms of function pursuant to § 112 ¶ 6. *See id.* at 1211; *see also Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1377 (Fed. Cir. 2001). The “price that must be paid” for use of means-plus-function claim language is the limitation of the claim to the means specified in the written description and equivalents thereof. *See O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). “If the specification does not contain an adequate disclosure of the structure that corresponds to the claimed function, the patentee will have ‘failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112,’ which renders the claim invalid for indefiniteness.” *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1382 (Fed. Cir. 2009), quoting *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc). It is important to determine whether one of skill in the art would understand the specification itself to disclose the structure, not simply whether that person would be capable of implementing the structure. *See Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999); *Biomedino*, 490 F.3d at 953. Fundamentally, it is improper to look to the knowledge of one skilled in the art separate and apart from the disclosure of the patent. *See Medical Instrumentation*, 344 F.3d at 1211-12. “[A] challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks

disclosure of structure sufficient to be understood by one skilled in the art as being adequate to perform the recited function.” *Budde*, 250 F.3d at 1376-77.

At issue in this case is whether certain claims of the patent-in-suit are indefinite. A claim is invalid for indefiniteness if it fails to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. 35 U.S.C. § 112, ¶ 2. To prevail on an indefiniteness argument, the party seeking to invalidate a claim must prove “by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008). The primary purpose of the definiteness requirement is to ensure public notice of the scope of the patentee’s legal right to exclude, such that interested members of the public can determine whether or not they infringe. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005); *Halliburton*, 514 F.3d at 1249; *Honeywell Int’l Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1338 (Fed. Cir. 2003). Courts apply the general principles of claim construction in their efforts to construe allegedly indefinite claim terms. *Datamize*, 417 F.3d at 1348; *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007). A claim is indefinite only when a person of ordinary skill in the art is unable to understand the bounds of the claim when read in light of the specification. *Miles Labs., Inc. v. Shandon, Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993); *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1371 (Fed. Cir. 2008). A determination of claim indefiniteness is a conclusion of law. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375-76 (Fed. Cir. 2001); *Datamize*, 417 F.3d at 1347.

A claim is indefinite only if the claim is “insolubly ambiguous” or “not amenable to construction.” *Exxon*, 265 F.3d at 1375; *Young*, 492 F.3d at 1346; *Halliburton*, 514 F.3d at

1249; *Honeywell*, 341 F.3d at 1338-39. A court may find a claim indefinite “only if reasonable efforts at claim construction prove futile.” *Datamize*, 417 F.3d at 1347. A claim term is not indefinite solely because the term presents a difficult claim construction issue. *Id.*; *Exxon*, 265 F.3d at 1375; *Honeywell*, 341 F.3d at 1338. “If the meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, . . . the claim [is] sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon*, 265 F.3d at 1375; *Halliburton*, 514 F.3d at 1249.

III. AGREED CONSTRUCTIONS

The parties have agreed to the definition of the following term:

Term	Agreed Construction
<i>A plunger drive ram</i>	A plunger drive ram

Joint Claim Construction and Prehearing Statement at 1. [Dkt. No. 167]

IV. TERMS IN DISPUTE

A. An injector for injecting fluids from a syringe into an animal subject

Term	E-Z-EM’s Definition	Mallinckrodt’s Definition
<i>An injector for injecting fluids from a syringe into an animal subject, comprising:</i>	An injector head for injecting fluids from a syringe into an animal subject, comprising:	An injector for injecting fluids from a syringe into an animal subject, comprising:

Both independent claims recite in the preamble, “An injector for injecting fluids from a syringe into an animal subject.” ’710 patent, Claims 1, 9. The parties dispute whether the claims should be limited to the injector head, which is that portion of the injector that houses the syringe and is capable of tilting. Mallinckrodt seeks to have the claims apply to an entire injector system, including the console and power pack. E-Z-EM wants to limit the scope of the claims to the injector head by having the Court construe “injector” in the preamble to mean “injector head.” Below is a Figure 1 from the ’710 patent, depicting an injector system of the preferred

embodiment, wherein the injector head is identified by 22, the console by 24, and the power pack is identified by 26:

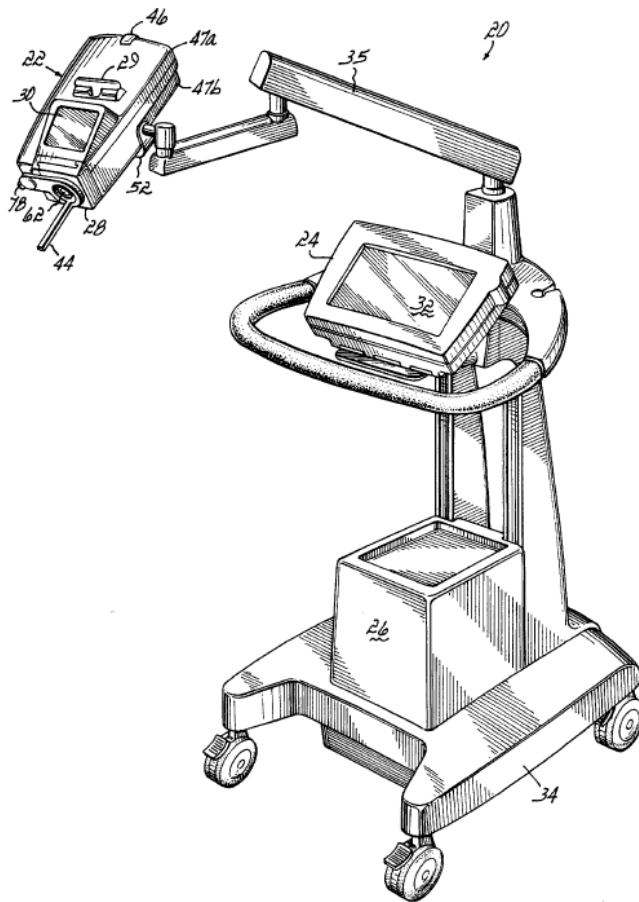
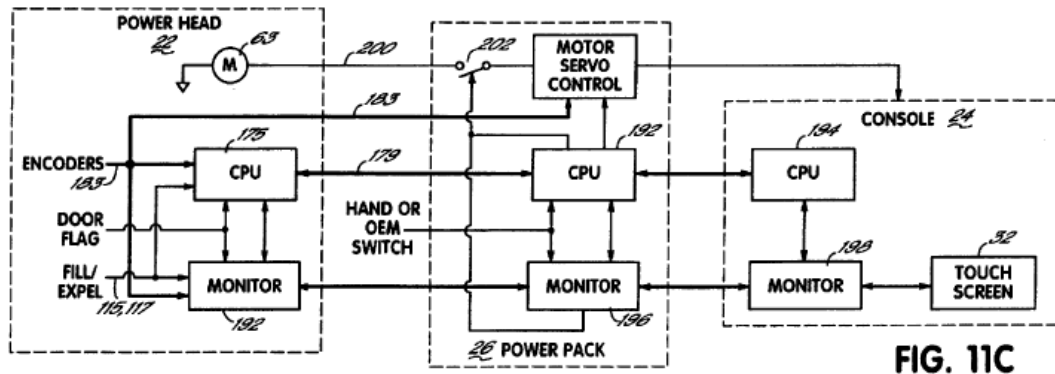


FIG. 1

Mallinckrodt argues that narrowly limiting the scope of the claims to the injector head would create the unacceptable result of excluding the preferred embodiment. The injector of both independent claims 1 and 9 comprises “a control circuit connected to said motor and said display, controlling said motor to move said ram and plunger to inject fluid from said syringe, and generating display information and delivering said display information to said display.” ‘710 patent, Claims 1, 9. Mallinckrodt points to Figure 11C, below, which shows the preferred embodiment having a Motor Servo Control that controls the motor and is located in the power pack, and not in the injector head.



However, the Motor Servo Control is not the only control circuit that is connected to the motor and to the display, as required by the claim limitation. *See* ‘710 patent, Claim 1 (“a control circuit connected to said motor *and said display*”). In addition to the Motor Servo Control, CPU 175, which is located in the injector head, is connected to both the display and the motor and controls both.² The specification explains, “power head CPU 175 delivers a control signal to power pack 26, requesting a ram movement.” ‘710 patent, 18:43–44. *See also* ‘710 patent, 17:42–64 (“If these signals indicate that the hand-operated control is in the home position, then CPU 175 should not be generating movement under hand-operated control. . . . If this signal indicates that the door of power head 22 is other than in the locked position, CPU 175 should not be requesting movement of the plunger drive ram”). CPU 175 also controls the display: “CPU 175 in the power head 22 drives display 30 to produce the display orientation.” ‘710 patent, 20:45–46. Therefore, this particular argument that E-Z-EM’s proposal excludes the preferred embodiment is unavailing because the injector head does in fact contain the claimed control circuit.

Mallinckrodt further argues that the specification and testimony from both parties’ witnesses show that a person of ordinary skill in the art would understand “injector” to mean an

² It is debatable whether the Motor Servo Control is even connected to the display, but the parties do not raise the issue.

injector system and not and injector head. However, some of the evidence Mallinckrodt puts forward equally supports the conclusion that the use of “injector” could refer to the injector head and not the entire injector system. The specification in several places uses “injector” to mean both an injector head and an injector system. For example, the specification refers to the “injector housing” when it is discussing mounting face plates to the injector head. ‘710 patent, 1:66–2:10. When discussing the tilt of the injector head, the specification interchangeably uses injector and injector head: “The injector head includes a tilt angle sensor for detecting the tilt angle of the *head*, and uses this tilt angle to choose one of two display orientations. As a result, the display is always oriented properly for reading by the operator, regardless of whether the *injector* is tilted upright for filling or down for injection.” ‘710 patent, 3:36–45. Based on this evidence, it is not so “clear,” as Mallinckrodt asserts, that “injector” as used in the claims and specification refers to the entire injector system and *not* just the injector head.

E-Z-EM argues that the way the word “injector” is used in the claims suggests that it was referring to just the injector head and not the entire injector system. For example, the third limitation recites, “position a syringe relative to *said injector* to permit said plunger drive ram to engage and move a plunger into or out of said syringe.” ‘710 patent, 21:23–26. According to the argument, a syringe’s position relative to the console or power pack would have no bearing on the plunger drive ram’s ability to engage with the plunger. It is the syringe’s position relative to the *injector head* that matters. Similarly, the “tilt sensor generat[es] a tilt angle signal indicative of an angle of tilt of *said injector* relative to the direction of Earth gravitation.” *Id.* at 32–34. *See also id.* at 58–66 (“said injector is tilted upward” and “said injector is tilted downward”). E-Z-EM argues that it is the injector head—not the injector system—that tilts and the scope of the claims is therefore limited to the injector head. Nonetheless, the specification

squarely contradicts E-Z-EM's proposal by expressly declaring that "an injector 20 in accordance with the present invention includes . . . a power head **22**, a console **24** and power pack **26**" '710 patent, 5:46–49.

The parties dispute the proper scope of the invention and it is the Court's duty to resolve that dispute. *See O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co. LTD.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute."). The fact that the specification at times uses "injector" and "injector head" interchangeably does not require that the claims be narrowly limited to the injector head instead of encompassing an entire injector system. The language of the claims, on the other hand, shows that the claims should not be so broad as to have within its scope all injector systems, including those that are incapable of tilting. If, as Mallinckrodt argues, the term "injector" is synonymous with "injector system," the Court should be able to successfully substitute "injector system" without creating a meaningless result. Mallinckrodt's proposed broad reading does not work well for those limitations involving a tilt angle:

1. An **[injector system]** for injecting fluids from a syringe into an animal subject, comprising:

[a] a plunger drive ram,

[b] a motor for moving said plunger drive ram,

[c] a syringe mounting for attachment to a syringe to position a syringe relative to said **[injector system]** to permit said plunger drive ram to engage and move a plunger into or out of said syringe,

[d] an electronic display displaying information regarding the activities and state of operation of said **[injector system]**, said display capable of displaying information in at least a first and a second orientation,

[e] a tilt sensor generating a tilt angle signal indicative of an angle of tilt of said **[injector system]** relative to the direction of Earth gravitation, and

[f] a control circuit connected to said motor and said display, controlling said motor to move said ram and plunger to inject fluid from said syringe, and generating display information and delivering said display information to said display,

[g] wherein said display is responsive to said tilt angle signal to display said display information in said first orientation in response to a first range of values of said tilt angle signal, and to display said display information in said second orientation in response to a second range of values of said tilt angle signal.

6. The injector of claim 5 wherein said control circuit operates said motor at a first speed if said tilt angle signal indicates that said **[injector system]** is tilted upward with an outlet of said syringe elevated above said syringe, and said control circuit operates said motor at a second speed slower than said first speed if said tilt angle signal indicates that said **[injector system]** is tilted downward with an outlet of said syringe positioned below said syringe.

7. The injector of claim 1 further comprising a hand operated movement control connected to said control circuit for generating a movement signal, said control circuit responsive to said movement signal to cause motion of said motor in a direction indicated by said movement signal, said control circuit further responsive to stored programming to automatically move said motor to perform an injection, wherein said control circuit is responsive to said tilt angle signal to inhibit automatic movement of said motor in response to stored programming unless said tilt angle signal indicates that said **[injector system]** is tilted within a predetermined range of angles relative to Earth gravitation.

Claim 6, Claim 7, and the fifth limitation of Claim 1 do not allow such a broad construction.

The Court ordinarily should construe “injector” consistently throughout the claims. *See Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1328 (Fed. Cir. 2006) (“[T]he same terms appearing in different claims in the same patent . . . should have the same meaning ‘unless it is clear from the specification and prosecution history that the terms have different meanings and different portions of the claims.’”) (quoting *Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001)). During the *Markman* hearing, both parties agreed that the invention relates to the “tiltable portion” of an injector system. As written, the claims require clarification that what is invented is an injector system with a tiltable portion and

that behaves differently depending upon the tilt angle of the tiltable portion. *See K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999) (“Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee.”); *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 396 (Ct.Cl. 1967) (“Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth.”); *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000) (“In claim construction the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art. . . . The construction of claims is simply a way of elaborating the normally terse claim language[] in order to understand and explain, but not to change, the scope of the claims.”). The Court construes “injector,” as the term is used in the preamble of claims 1 and 9, and in limitations [c] and [d], to elaborate that the injector of the invention is “a powered injector system having a tiltable portion.” The Court further elaborates that, “angle of tilt of said injector” as it appears in limitation [e] of claim 1 and limitation [d] of claim 9 means “angle of tilt of the tiltable portion of said injector.” In Claims 6, 7, 10, 11, and 12, the Court construes “said injector is tilted” to mean “tiltable portion of said injector is tilted.”

B. a motor for moving said plunger drive ram

Term	E-Z-EM’s Definition	Mallinckrodt’s Definition
“a motor for moving said plunger drive ram”	an electric motor for moving said plunger drive ram	a motor for moving the plunger drive ram

The parties dispute whether the motor of the invention must be an electric motor. Mallinckrodt argues that the motor can be any kind of motor where as E-Z-EM urges the court to construe “motor” to mean “electric motor.” E-Z-EM argues that, based upon the specification, the invention is an improvement upon “typical injectors,” and “typical injectors” contemporaneous with the filing date used electric motors. E-Z-EM further argues that the only

motor disclosed in the patents is an electric motor.

The Court declines to construe “motor” narrowly, as E-Z-EM suggests. To do so would improperly import a limitation from the preferred embodiment. Nothing in the claims or specification supports the conclusion that the motor claimed cannot be a hydraulic motor, or any other type of motor. The Court construes “motor” to be “a device that imparts motion.”

C. a syringe mounting for attachment to a syringe to position a syringe relative to said injector to permit said plunger drive ram to engage and move a plunger into or out of said syringe

Term	E-Z-EM’s Definition	Mallinckrodt’s Definition
<i>“a syringe mounting for attachment to a syringe to position a syringe relative to said injector to permit said plunger drive ram to engage and move a plunger into or out of said syringe”</i>	a syringe mounting for attachment to a syringe to position a syringe relative to said injector head to allow said plunger drive ram to engage and move a plunger from outside to inside (to enter) or inside to outside (exit) of said syringe	a syringe mounting that attaches to a syringe, so that the syringe is positioned to allow the plunger drive ram to engage and move the plunger toward or away from a discharge tip of the syringe

The parties dispute whether this claim limitation is subject to 35 U.S.C. § 112 ¶ 6 and whether the plunger must be capable of entirely exiting the syringe. E-Z-EM argues that “syringe mounting” lacks sufficient structure and is therefore a means-plus-function term. E-Z-EM also argues that the syringe mounting must permit the plunger to completely enter and exit the syringe. The dispute regarding a plunger is the subject of a pending motion for summary judgment.

a. “syringe mounting”

As a preliminary matter, the Federal Circuit has held that “the absence of [the word “means”] creates a rebuttable presumption that section 112, paragraph 6, does not apply.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1311 (Fed. Cir. 2005) (citing *Personalized Media Commc’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703–04 (Fed. Cir. 1998)). E-Z-EM argues

that “syringe mounting” connotes no structure and the ‘710 patent never uses or defines the term. E-Z-EM relies on testimony that one inventor had “trouble understanding what [syringe mounting] means” as evidence that it has no reasonably well understood meaning in the art. E-Z-EM Brief at 29.

Mallinckrodt argues that “syringe mounting” is used in common parlance and recites sufficient structure, citing to the Federal Circuit for the proposition that “it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies structures by their function.” *Lightning World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359–60 (Fed. Cir. 2004). To support its contention that “syringe mounting” is used in common parlance, Mallinckrodt relies upon the testimony of E-Z-EM’s expert, Alois Langer, about an unrelated patent application relating to powered syringes:

Q: Do you agree with the statement as set forth in [U.S. Patent Pub. No. 2007/0088270 ¶ 2], “a typical power injector comprises an injector head having a syringe mount and a drive ram”?

A: It sounds like a reasonable statement.

Mallinckrodt Brief, Ex. 11 at 83:5-9. Mr. Langer further testified that a syringe mounting, “in the context of this patent, [is] some sort of mechanism that’s used to attach a syringe to the injector.” *Id.* at 32:9–13. To further buttress its argument that “syringe mounting” is used in common parlance, Mallinckrodt cites to a statement from the PTO during reexamination of the ‘710 patent that a “syringe mounting” was a “barrel clamp.” Mallinckrodt Brief, Ex. 24, at 4.

The Court is of the opinion that E-Z-EM has not overcome the presumption that “syringe mounting” is not a phrase to which 35 U.S.C. § 112 ¶ 6. “Syringe mounting” is not a term for which “one of skill in the art would have no recourse but to turn to the [patent’s] specification to derive a structural connotation.” *Welker Bearing Co. v. PHD, Inc.*, 550 F.3d 1090, 1096 (Fed.

Cir. 2008). A “mounting” is something that holds an object in place, and a “syringe mounting” is something that would hold a syringe in place. Because a syringe is tube-shaped, “syringe mounting” connotes a structure that would hold a tube in place. Syringe mounting is therefore not a means-plus-function term.

b. “into or out of said syringe”

E-Z-EM argues that the plain meaning of “into” and “out of” necessitates the construction that the plunger is capable of entering and exiting the syringe. E-Z-EM applies the doctrine of claim differentiation to now-cancelled claims that recite “to permit said plunger drive ram to engage and move a plunger within said syringe.” E-Z-EM Brief, at 33. According to the argument, the inventors knew how to draft a claim for a plunger that need not exit the syringe, but chose not to use those words in the asserted claim. E-Z-EM also relies upon the specification and claim preamble’s use of “into” (e.g., “injecting fluids from a syringe into an animal subject”) as showing that “into” means specifically “to enter.” E-Z-EM Brief, at 34.

E-Z-EM glosses over those parts of the specification that use “into” and “out of” as directional terms. The specification explains that the plunger moves “toward and away from a discharge tip 40 of the syringe,” but never mentions exiting the syringe. ‘710 patent, 6:20–23. The specification also recites that the plunger drive ram “move[s] forward, i.e., *outward from* the power head housing . . . [or] backward, i.e., *into* the power head housing.” *Id.* at 10:56–63.

E-Z-EM’s reliance on semantics does not give the Court a reason why, in the context of the claims, the plunger must be capable of completely exiting the syringe. The Court construes the limitation to mean, “a syringe mounting that attaches to a syringe, so that the syringe is positioned to allow the plunger drive ram to engage and move the plunger toward or away from a discharge tip of the syringe.”

D. an electronic display displaying information regarding the activities and state of operation of said injector, said display capable of displaying information in at least a first and a second orientation

Term	E-Z-EM's Definition	Mallinckrodt's Definition
<i>"an electronic display displaying information regarding the activities and state of operation of said injector, said display capable of displaying information in at least a first and a second orientation"</i>	an electronic display displaying information regarding the activities and state of operation of said injector head, said display capable of displaying information in at least a first and a second orientation so that the same displayed information is oriented properly for reading	an electronic display displaying at least some information regarding the activities and state of operation of the injector. The display is able to display at least some information in at least a first orientation and a second orientation.

The parties dispute whether the display must display all information in multiple orientations, and whether the display must be "oriented properly for reading." Mallinckrodt argues that not all information need be properly oriented for reading, such as graphics, and therefore only some information needs to be reoriented. E-Z-EM argues that the display is "tilt compensating" and the same information that is displayed in one orientation must also be displayed in a second orientation.

Mallinckrodt's argument is twofold. First, the claim does not require that all of the displayed information be displayed in a first and second orientation, primarily because of the absence of the word "said" before the second occurrence of "information." Second, "oriented properly for reading" is an unnecessary limitation because, according to the argument, it would preclude the display of graphics, which need not be "oriented properly for reading." According to Mallinckrodt, only text would need to be "oriented properly for reading," yet the preferred embodiment and dependent claims expressly contemplate the display of graphics. *See* '710 patent, Claim 4 ("wherein display is a matrix of evenly-spaced pixels which can be selectively

activated to, in combination, for[m] graphics or characters for display”). Mallinckrodt further argues that E-Z-EM’s proposal introduces ambiguity because a person of ordinary skill in the art would not be able to know when a display is properly oriented.

E-Z-EM argues that the Summary of the Invention requires that a display be “tilt-compensating” and “always oriented properly for reading.” ‘701 patent, 3:36–45. E-Z-EM also argues that a later limitation in the claims requires that all of the information on the display be “flipped” because it states that “said display is responsive to said tilt angle signal to display *said display information* in said first orientation in response to a first range of values” *Id.* at 21:40-45. E-Z-EM renews its injector head argument, asking the Court to insert the limitation that is display the activities of the injector head. Finally, E-Z-EM argues that the invention’s purpose to solve the problem in the prior art would be thwarted unless all of the information in the display were reoriented. The Background of the Invention explains a particular problem with the prior art:

Unfortunately, operators have found it cumbersome . . . to read the injector head gauges and displays, for several reasons, not the least of which is the necessary tilting of the injector head between the upward, filling position to the downward, injection position, . . . and at some tilt angles, rendering the gauges or displays difficult to read.

‘710 Patent, 1:55–62. According to E-Z-EM, if only some of the displayed information were “reoriented properly for reading” on the injector display, then the injector display would fail to overcome the prior art. Therefore, to solve the problem with the prior art, E-Z-EM urges the Court to adopt a construction that would require that *all* displayed information be shown in two or more orientations.

Reviewing the patent figures demonstrates that not even the preferred embodiment would satisfy E-Z-EM’s proposal. “[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” *On-Line Techs., Inc. v. Bodenseewerk Perkin-*

Elmer GmbH, 386 F.3d 1133, 1138 (Fed.Cir. 2004) (quotation marks omitted). First, it is highly unlikely that Figs. 13B & 13C represent *all* of the available information regarding the “activities and status of operation” of the injector. It does not indicate the angle of tilt, whether the injector is operating in programmed mode, or whether the injector is inhibiting motion. Second, it is clear that not all information on the display is reoriented when the injector is tilted. For example, the image of the syringe is not “flipped,” as E-Z-EM’s construction would require.

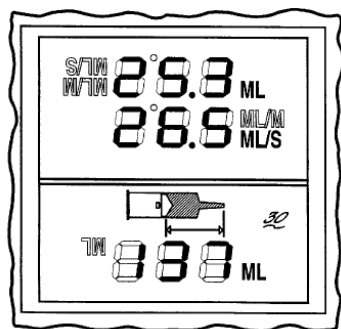


FIG. 13B

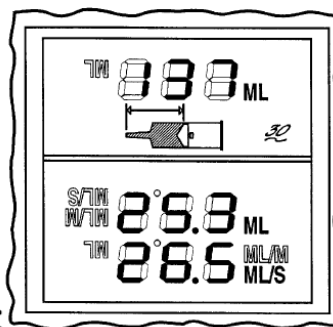


FIG. 13C

The Court finds persuasive E-Z-EM’s argument that the Summary of the Invention requires the additional limitation that the display be “oriented properly for reading.” A display that reorients information by 90 degrees, yet remains difficult to read, would satisfy the claim language but would be beyond the scope of the invention. Mallinckrodt objects on the basis that it would preclude the display of graphics or require that graphics be reoriented because of the word “reading.” E-Z-EM’s proposed language, however, comes directly from the Summary of the Invention: “The injector head includes a tilt angle sensor for detecting the tilt angle of the head, and uses this tilt angle to choose one of two display orientations. As a result, *the display is*

always oriented properly for reading.” ‘710 patent, 3:40–43. The Court, however, agrees that the invention does not require that all information about the injector be included on the display. Nor does the invention require that all information on the display change orientations when there is a change in tilt angles.

The Court construes the limitation to mean, “an electronic display displaying *at least* some information regarding the activities and state of operation of said injector head, said display capable of displaying *at least* some information in at least a first and a second orientation so that said information is oriented properly for reading.”

E. a tilt sensor generating a tilt angle signal indicative of an angle of tilt of said injector relative to the direction of earth gravitation

Term	E-Z-EM’s Definition	Mallinckrodt’s Definition
<i>“a tilt sensor generating a tilt angle signal indicative of an angle of tilt of said injector relative to the direction of Earth gravitation”</i>	a tilt sensor generating a tilt angle analog signal indicative of an angle of tilt of said injector head relative to the direction of Earth gravitation	a tilt sensor generating a tilt angle signal that indicates an angle of tilt of the injector relative to the direction of Earth gravitation

The parties dispute whether the tilt angle signal must be analog. Mallinckrodt argues that nothing in the claims or specification requires that the tilt angle signal be limited to an analog signal. Mallinckrodt points out that, in the preferred embodiment, the control circuit receiving the signal in the subsequent claim limitations receives a *digital* signal. *See* ‘710 patent, 15:20–31. The preferred embodiment includes an analog-to-digital converter that is “incorporated into the power head control circuit for quantizing analog signals produced by various electrical elements.” *Id.* at 15:3–6. Even though the preferred embodiment generates an analog signal, the fact that it is converted to digital before it is used tells the Court that an analog signal is anything but required.

E-Z-EM argues that the claim language requires a range of values and only an analog signal can provide a *continuous* range of values. E-Z-EM relies upon inventor testimony that “a tilt angle signal . . . implies continuous output” and that the inventors rejected a digital mercury switch because of its inability to provide that continuous range of values. E-Z-EM Brief at 51. E-Z-EM also cites to the European patent office’s use of the phrase “specific angle” to stand for the proposition that “the EP Examiner also understood that the tilt sensor of claims 1 and 9 was capable of detecting (and communicating to the control circuitry) the tilt position of the power head at any (and every) angle.” *Id.* at 56.

The claim language does indeed require a range of values, but contrary to E-Z-EM’s assertion, it does not require a *continuous* range of values. Specifically, the claim recites, “a tilt sensor generating a tilt angle signal indicative of an angle of tilt of said injector relative to the direction of Earth gravitation . . . wherein said display is responsive to *said* tilt angle signal.” ‘710 patent, 21:32–40. In fact, the preferred embodiment uses only six ranges, the smallest of which is 40 degrees. Furthermore, the preferred embodiment creates an analog signal and converts it to digital before the display responds to it. *See* ‘710 patent, 15:28–31. Inserting the analog limitation, as E-Z-EM requests, would read out the preferred embodiment because it would require the display to respond to an analog signal, rather than a digital signal. The Court declines to insert E-Z-EM’s proposed limitation and adopts the plaintiff’s proposed construction.

F. Claim 4

Term	E-Z-EM's Definition	Mallinckrodt's Definition
<i>"The injector of claim 1 wherein said display is a matrix of evenly-spaced pixels which can be selectively activated to, in combination, form graphics or characters for display."</i>	The injector of claim 1 wherein said display is a matrix of evenly-spaced pixels which can be selectively activated to, in combination, for graphics or characters for display.	Claim 4 is proper as written.

The parties dispute whether a certificate of correction amending Claim 4 is valid. In 2007, the patentee applied for a certificate of correction that changed, *inter alia*, claim 4 to read:

The injector of claim 1 wherein said display is a matrix of evenly-spaced pixels which can be selectively activated to, in combination, **form** graphics or characters for display.

'710 patent, Certificate of Correction at 2. The previous version of the claim language read:

The injector of claim 1 wherein said display is a matrix of evenly-spaced pixels which can be selectively activated to, in combination, **for** graphics or characters for display.

'710 patent, 21:52–54. The patentee changed the word “for” to read “form.”

“Whenever [there is] a mistake of a clerical or typographical nature, or of minor character,” the PTO can issue a certificate of correction “if the correction does not involve such changes in the patent as would constitute new matter or would require re-examination.” 35 U.S.C. § 255. A mistake of minor character is one that, if corrected, does not broaden the scope of a claim. *Superior Fireplace Co. v. Majestic Prods. Co.*, 270 F.3d 1358, 1375 (Fed. Cir. 2001). A mistake is of typographical or clerical nature if the requested correction is “apparent from the specification, drawings, and prosecution history.” *Id.* at 1374. “Invalidating a certificate of correction for impermissible broadening therefore requires proof of two elements: (1) the

corrected claims are broader than the original claims; and (2) the presence of the clerical or typographical error, or how to correct that error, is not clearly evident to one of skill in the art.” *Central Admixture Pharmacy Services, Inc. v. Advanced Cardiac Solutions, P.C.*, 482 F.3d 1347, 1353 (Fed. Cir. 2007). The party that challenges a certificate of correction bears the “clear and convincing” burden of proof. *Superior Fireplace*, 270 F.3d at 1367.

Mallinckrodt argues that the change reflects a mistake of minor character as well as a typographical. E-Z-EM does not address whether the mistake is one of minor character; it only argues that the correction is improper because it is not clear to one of ordinary skill what the correction ought to be.

E-Z-EM has not met its burden of showing, by clear and convincing evidence, that the certificate of correction is improper. Changing “for” to “form” does not broaden the scope of the claim. The original and corrected versions both encompass “a matrix of evenly-spaced pixels” and the display of “graphics or characters.” The correction is also readily apparent. It is evident from the language of the claims that “, in combination,” splits an infinitive. That is, pixels “can be selectively activated [to do something to] graphics and characters for display.” A person of ordinary skill in the art would understand that pixels are selectively activated to *form* characters and graphics.

G. said control circuit . . . responsive to said tilt angle signal to determine a speed of motion of said motor

Term (claims 5 and 9)	E-Z-EM’s Definition	Mallinckrodt’s Definition
“ <i>said control circuit . . . responsive to said tilt angle signal to determine a speed of motion of said motor</i> ” (<i>Claims 5 and 9</i>)	said control circuit is responsive to said tilt angle analog signal to control one or more speeds of motion of said motor	The control circuit is responsive to the tilt angle signal to determine (i.e., permit) a non-zero speed of motion of the motor

This claim limitation appears in dependent claim 5 and independent claim 9. The parties

dispute whether “speed of motion” can include a “zero speed” or if it refers only to “movement” speed. Mallinckrodt argues that the claims’ scope is limited to an active motor. Mallinckrodt argues that the specification differentiates between initiating and controlling the movement of the plunger drive ram and the language “speed of *motion*” necessarily excludes zero speeds because a zero speed is the absence of motion. E-Z-EM, on the other hand, argues that the claim scope includes an inactive motor, as well as an active motor.

According to E-Z-EM’s argument, because claim 9 is broader than both dependent claims 10 and 11, it must include all of the speeds available in claims 10 and 11. Claim 11 discloses inhibiting the programmed movement of the plunger drive ram at certain angles, during which the invention can only be used with hand-operated controls. Therefore, according to E-Z-EM, the motor necessarily includes zero speeds.

E-Z-EM turns claim construction on its head. First, E-Z-EM asks the Court to replace the word “determine” with “control. Using this word replacement, E-Z-EM argues that dependent claims give context to the meaning of the remainder of the claim limitation. In claim 9, the control circuit “control[s]” the motor to “move the plunger,” in addition to “determin[ing] a speed of motion.” In dependent claim 10, the control circuit “operates” the motor. In dependent claim 11, the control circuit “move[s]” and “inhibit[s]” the motor.

E-Z-EM attempts to equate all of these different verbs. Within these related claim limitations, the Court identified five distinct activities of the control circuit: 1) controlling the motor to move the plunger, 2) determining a speed of motion, 3) operates the motor at various speeds, 4) moving the motor to perform an injection, and 5) inhibiting automatic movement. Different words are presumed to have different meanings. See *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1369 (Fed. Cir. 2007). In the disputed limitation, the patentee

chose to use “determine” rather than “control” or “move.” The Court declines, therefore, to replace “determine” with “control.”

Having concluded that “determine” does not mean “control,” the dependent claim limitations do not provide nearly the support that E-Z-EM would like for the proposition that “speed of motion” includes an inactive motor. Inhibit means something different from “move.” The Court does not agree that “speed of motion” includes zero speeds. The specification speaks in terms of a range of speeds (i.e., a broad range or a narrow range). The claims and the summary of the invention, indicate that there is a maximum safe speed for injection as well as for filling the syringe. *See* ‘710 patent, Claims 6, 10 (“a second speed slower than said first speed”); *id.* at 3:55–58 (“the range of fill and expel speeds available from the hand-operated movement control is broader when the injector head is tilted upward than when the head is tilted downward”); *id.* at 3:23–27 (discussing the potentiometer of the manual operation, which is part of a divisional application, and explaining that a “detent angle . . . of rotation corresponds to a recommended maximum speed for filling the syringe, i.e., the largest speed at which fluid can be drawn into the syringe without dramatic increase in the generation of air bubbles”). That is, the invention permits a full range of plunger speeds, from zero up to a specified maximum safe speed.

The preferred embodiment reinforces the notion that the control circuit permits a range of speeds. “Region 4 is the ‘inject’ region. . . . [T]he range of movement speeds that can be generated with the hand-operated movement control is substantially *narrowed* as compared to those available in regions 1, 2a or 2b. This permits fine-tuned control of fluid injection” *Id.* at 20:6–15. In the context of the patent, the control circuit that is “responsive” to a tilt angle signal is the control circuit that identifies the permitted range of speeds. “[T]he control circuit of

power head **22** establishes that the plunger drive will move at near to the ideal fill speed when lever **29** has been rotated such that flag **105** is in contact with the detent spring **106**.” ‘710 patent, 11:60–67. *See also* 19:50–56 (“CPU 175 repeatedly samples [the tilt] signal and determines the angle of power head **22**”). When the power head is pointing upwards, there is a “*wide[r]* range of movement speeds” than when the power head is pointing downwards. *Id.* at 19:49–20:16; *see also id.* at 11:52–54 (“there is an ideal maximum speed at which fluid can be drawn into the syringe without forming air bubbles in the fluid due to non-laminar flows”). This range is a range of “movement” and does not include stasis.

For the same reasons outlined above, the Court declines to insert “analog” into this claim limitation, as requested by E-Z-EM. The Court construes the term “said control circuit . . . responsive to said tilt angle signal to determine a speed of motion of said motor” to be “said control circuit . . . responsive to said tilt angle signal to determine at least the maximum speed of motion of said motor.”

H. the injector of claim 1 further comprising a hand-operated movement control connected to said control circuit for generating a movement signal

Term	E-Z-EM’s Definition	Mallinckrodt’s Definition
<i>“The injector of claim 1 further comprising a hand-operated movement control connected to said control circuit for generating a movement signal, said control circuit responsive to said movement signal to cause motion of said motor in a direction indicated by said movement signal, said control circuit further responsive to stored programming to automatically move said motor to perform an</i>	The injector of claim 1 further comprising a hand-operated movement control lever, not a button nor a switch, connected to said control circuit for generating a movement signal, said control circuit responsive to said movement signal to cause motion of said motor in a direction indicated by said movement signal, said control circuit further responsive to stored programming to automatically move said motor to perform an injection, wherein said control circuit is responsive	The injector further comprises a hand-operated movement control connected to the control circuit for generating a movement signal. The control circuit is responsive to the movement signal to cause motion of the motor in a direction indicated by the movement signal. The control circuit is also responsive to stored programming to automatically move the motor to perform an injection. The control circuit is responsive to the tilt angle signal to inhibit

<i>injection, wherein said control circuit is responsive to said tilt angle signal to inhibit automatic movement of said motor in response to stored programming unless said tilt angle signal indicates that said injector is tilted within a predetermined range of angles relative to Earth gravitation”</i>	to said tilt angle analog signal to inhibit automatic movement of said motor in response to stored programming unless said tilt angle analog signal indicates that said injector head is tilted within a predetermined range of angles relative to Earth’s gravitation.	automatic movement of the motor in response to stored programming unless the tilt angle signal indicates that the injector is tilted within a predetermined range of angles relative to Earth gravitation.
---	---	--

The parties dispute whether the hand-operated movement control is required to be a lever, or whether it can include buttons or switches. E-Z-EM argues that the Background of the Invention criticizes buttons and switches and the invention is an improvement over that feature of the prior art. Specifically, the specification explains that “operators have found it cumbersome to use the hand-operated movement buttons . . . [because] tilting of the injector head between the upward, filling position to the downward, injection position, chang[es] the positions of the hand-operated movement buttons relative to the operator.” ‘710 patent, 1:55–62. The Summary of the Invention goes onto say that the “present invention also features a hand-operated fill/expel control which facilitates operator control of the injector.” ‘710 patent, 2:47–49. It is not clear to the Court that the invention uses a lever because all levers are superior to buttons or switches. Rather, the paragraphs immediately following in the Summary explain that the lever allows the invention to incorporate a potentiometer so that the operator has “feedback on the injection pressure being applied.” ‘710 patent, 2:56–3:35. This portion of the specification is from the originally filed patent application, which included claims that have since been severed, including those that specifically related to a feedback-producing lever.

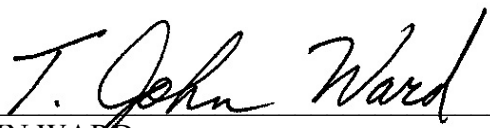
“If two or more independent and distinct inventions are claimed in one application, the Director may require the application to be restricted to one of the inventions.” 35 U.S.C. § 121.

The PTO declared that the original application contained six “patentably distinct species of the claimed invention.” Mallinckrodt Brief, Exhibit 2 at M-00000176. The “species groups” included inventions relating to “air detection means; . . . *hand-operated movement control*; . . . electronic display of information responsive to a tilt angle sensor; . . . face plate mounting; [and] . . . plunger drive.” *Id.* Mallinckrodt Brief, Exhibit 2 at. The applicants canceled all claims but those within the species group relating to “electronic display of information responsive to a tilt angle sensor.” *Id.* at M-00000191. That is, per the PTO’s restriction requirement, the claims requiring a lever were canceled from the original application and later re-filed in a divisional application that issued as U.S. Patent No. 5,925,022. The Court declines to import a limitation from the specification that properly belongs to one of the inventions that the patent examiner determined was patentably distinct. The Court adopts the plaintiff’s proposal.

V. CONCLUSION

The court adopts the constructions set forth in this opinion for the disputed terms of the ‘710 patent. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the court.

SIGNED this 22nd day of February, 2010.



T. JOHN WARD
UNITED STATES DISTRICT JUDGE